

REMARKS

The claims now pending in the application are Claims 1 to 3, 6 to 8, 10, 11, 19 and 20, the independent claims being Claims 1, 11, 19 and 20. Claims 1, 6, 7 and 11 have been amended. Claims 4, 5, 9, 12 to 18, 21 and 22 have been cancelled.

In the Official Action dated July 15, 2003, Claim 9 was objected to under 35 U.S.C. § 1.75 as being a substantial duplicate of Claim 1. Claim 9 has been cancelled without prejudice or disclaimer of subject matter.

Claims 7, 8 and 10 have been rejected under 35 U.S.C. § 112, second paragraph, as indefinite. Claim 7 depending from Claim 1 has been objected to in that the structural relationships between the friction preventing member and the deformation restricting member are unclear. As currently amended, Claim 1 recites "a member disposed between said plurality of coupling members and said second holding member . . . " rather than "a deformation restricting member" and Claim 7 as currently amended recites that the member disposed between said plurality of coupling members and said second holding member also prevents generation of a frictional force between said coupling member and said second holding member during the coupling operation. Claim 6 has also been amended to correspond to Claim 1 as currently amended. With these changes, it is believed that the structural relationship for friction preventing and deformation restricting are clarified and that Claims 7, 8 and 10 as currently amended fully meet the requirements of 35 U.S.C. § 112, second paragraph.

Claims 1 to 3 and 6 to 8 and 11 have been rejected under 35 U.S.C. § 102(b), as anticipated by U.S. Patent No. 4,780,640 (Hasegawa). Claims 1 to 3, 6 to 8 and 11 have been further rejected under 35 U.S.C. § 103(a), as unpatentable over U.S. Patent No.

4,889,406 (Sezerman), in view of U.S. Patent No. 5,652,922 (Kohno). Claim 10 has been rejected under 35 U.S.C. § 103(a), as unpatentable over the Sezerman '406 patent, in view of the Kohno '922 patent and the Hasegawa '640 patent. Reconsideration and withdrawal of the objection and rejections respectfully are requested in view of the above amendments and the following remarks.

Initially, Applicants gratefully acknowledge the Examiner's indication that the application contains allowable subject matter, and that Claims 19 and 20 are allowed. Applicants submit that the prior art fails to anticipate the present invention. Moreover, Applicants submit that there are differences between the subject matter sought to be patented and the prior art, such that the subject matter taken as a whole would not have been obvious to one of ordinary skill in the art at the time the invention was made.

Independent Claim 1 as currently amended is directed to an optical element holding mechanism in which a first holding member holds a first optical element and a second holding member holds a second optical element. Plural coupling members couple the first holding member and the second holding member to permit relative positions of the first and second holding members to be varied during a coupling operation. Plural urging members, respectively disposed between each of the plural coupling members and the second holding member urge and press the second holding member against the first holding member at least during the coupling operation to permit alignment of respective optical axes of the first and second optical elements during the coupling operation. A member disposed between the plural coupling members and the second holding member prevents deformation of the first holding member while relative positions of the first and second holding members are varied during the coupling operation. The first holding member has plural stud portions

and the member disposed between the plural coupling members and the second holding member has plural hole portions which receive the plural stud portions of the first holding member to prevent the deformation of the first holding member while relative positions of the first and second holding members are varied during the coupling operation.

Independent Claim 11 as currently amended is directed to optical apparatus having an apparatus body and an optical element holding mechanism. In the optical element holding mechanism, a first holding member holds a first optical element and a second holding member holds a second optical element. Plural coupling members couple the first holding member and the second holding member to permit relative positions of the first and second holding members to be varied during a coupling operation. Plural urging members, respectively disposed between each of the plural coupling members and the second holding member urge and press the second holding member against the first holding member at least during the coupling operation to permit alignment of respective optical axes of the first and second optical elements during the coupling operation. A member disposed between the plural coupling members and the second holding member prevents deformation of the first holding member while relative positions of the first and second holding members are varied during the coupling operation. The first holding member has plural stud portions and the member disposed between the plural coupling members and the second holding member has plural hole portions which receive the plural stud portions of the first holding member to prevent the deformation of the first holding member while relative positions of the first and second holding members are varied during the coupling operation.

In Applicants' view, Hasagawa discloses a projection television receiver in which at least one cathode ray tube receives video signals and projecting images therefrom.

The tube has a face; a lens mounted adjacent to the face for focusing the images projected by the tube; and a coolant disposed between the lens and the face for absorbing and dissipating heat from the tube. The coolant means includes 1,3-butylene glycol. The projection cathode ray tube 1 is inserted into the frame 2 with the projection face of the projection cathode ray tube 1 facing the projection cathode ray tube chamber 2c of the frame 2. A pressing plate 5 is inserted onto the projecting cathode ray tube 1 from the rear, and respective screws 6 are inserted into through holes 5a of the pressing plate 5 to be tightened into frame attaching pillar portions 2 to fix the projection cathode ray tube 1 securely on the frame 2. The pressing plate 5 abuts, via elastic materials 7, against supporting portions 1b which project from the back surface of the projection cathode ray tube 1. The projection cathode ray tube 1 is attached onto the frame 2 so that the packing 4 is deformed by the fastening force of the screws 6 (at four corners of the pressing plate 5).

According to the invention defined in Claims 1 and 11 as currently amended, a first holding member has plural studs and the member disposed between the plural coupling members and the second holding member has plural hole portions that receive the plural stud portions to prevent deformation of the first holding member while the relative positions of the first and second holding members are varied during the coupling operation. This feature is disclosed at least from line 23 of page 25 to line 4 of page 26 in the specification.

As disclosed at least at lines 30 through 55 of column 4 with respect to Fig. 3 of Hasagawa that screw type coupling members 6 are received by a frame 2 through a second pressing member 5 and washers 10. In contrast to Hasagawa, it is a feature of Claims 1 and 11 that plural stud portions in a first holding member (e.g., 9c in Fig. 4) are

received by a member disposed between plural coupling members and the second holding member to prevent the deformation of the first holding member while relative positions of the first and second holding members are varied during the coupling operation. In contrast, Hasagawa fails in any manner to suggest any the stud arrangement such as in Claims 1 and 11. Accordingly, It is not seen that Hasagawa in any way teaches or suggests studs of a first holding member received by holes of a member disposed between plural coupling members and the second holding member as in Claims 1 and 11. It is therefore believed that Claims 1 and 11 are completely distinguished from Hasagawa and are allowable.

In Applicants' opinion, Sezerman discloses an adjustable connector for optically connecting one optical fibre to another fibre or a light source is disclosed. A base plate mounting the fibre is connected to another base plate with a resilient member between the base plates. The fibre terminates at a beam expanding or imaging lens. Sets of alternating first and second screws axially extend from one base plate to the other such that when a test signal is transmitted to the fibre the first screws can be adjusted to coarsely tilt one base plate relative to the other until approximately the desired signal strength is achieved. The second screws are then rotated to finely adjust the base plates to achieve the desired signal strength. In other embodiments adjusting screws extend radially with respect to a cylindrical housing holding the fibre so as to adjust the relative position thereof. Adjustment can also be achieved using a temporary jig which can be removed and reused. With the invention, insertion and tilt losses at the connector are minimized.

Kohno, in Applicants' view discloses a stationary barrel attached to a camera body. A first movable barrel, a second movable barrel and a third movable barrel are moved out successively. A first lens frame holding a first lens unit is held in the third barrel to be

movable along the optical axis, and a second lens frame holding a second lens unit is held in the second barrel to be movable along the optical axis. The three movable barrels are all housed in the stationary barrel, and the total moving-out mount of the three movable barrels is remarkably large compared to conventional arrangements.

Sezerman may teach a coupling arrangement in which screw coupling elements (34) couple base plates 16 and 18 and a bore supporting fibers for alignment. As discussed with respect to Hasagawa, it is a feature of Claims 1 and 11 that plural stud portions on a first holding member are received by a member disposed between the plural coupling members and the second holding member to prevent first holding member deformation during coupling. Sezerman is devoid of any suggestion of such plural stud portions on a base plate or of stud portions of the first holding member being received by a member between coupling members and the second holding member to prevent deformation of the first holding member. Accordingly, it is not seen that Sezerman in any manner suggests any of the features of Claims 1 and 11.

Kohno may teach a screw type coupling arrangement in which deformable washers function as urging members that couples element 7 to element 21. There is no suggestion in Kohno, however, of stud portions on one of the elements coupled by screws 25 which are received by the other coupled element. In contrast, it is a feature of Claims 1 and 11 that a first holding member has plural stud portions and another feature that a member disposed between said plural coupling members and the second holding member has plural hole portions which receive the plural stud portions of the first holding member to prevent the deformation of the first holding member while relative positions of said first and second holding members are varied during a coupling operation.

Neither Kohno nor Sezerman in any way suggests stud portions on a first holding member that are received by holes in a member disposed between the plural coupling members and the second holding member as in Claims 1 and 11. Accordingly, it is not seen that the addition of Kohno's urging members to Sezerman's screw coupling elements that couple a pair of base plates and a bore supporting fibers for alignment could possibly suggest the feature of Claims 1 and 11 of stud portions of the first holding member being received by a member disposed between coupling members and the second holding member to prevent deformation of the first holding member during a coupling operation. It is therefore believed that Claims 1 and 11 as currently amended are completely distinguished from any combination of Sezerman and Kohno and are allowable.

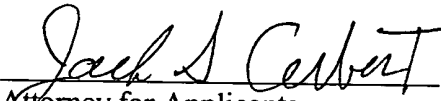
For the above reasons, Applicants submit that independent Claims 1 and 11 are allowable over the cited art.

Claims 2, 3 and 6 to 8 and 10 depend from Claim 1, and are believed allowable for the same reasons. Moreover, each of these dependent claims recites additional features in combination with the features of independent Claim 1, and is believed allowable in its own right. Individual consideration of the dependent claims respectfully is requested.

Applicants believe that the present Amendment is responsive to each of the points raised by the Examiner in the Official Action, and submit that the application is in allowable form. Favorable consideration of the claims and passage to issue of the present application at the Examiner's earliest convenience earnestly are solicited.

Applicants' attorney, C. Phillip Wrist, may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,


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